

Speaker: Tanmoy Bhattacharya (T2, LANL)

Title: HIV Phylogenetics: What, Why, and How

Phylogenetics is the scientific discipline of resolving relationships among and between organisms. In this 'introductory-level' talk, I shall describe what differentiates such historical processes as evolution from the dynamics commonly studied by physicists, why I am interested in studying such relationships amongst the available strains of HIV, and how one can unravel these using available genetic data. At Los Alamos, we have been using large-scale computation to study this evolutionary story and applying it both towards developing vaccine candidates and towards understanding HIV biology. The emphasis of the talk will be on the concepts and results rather than on the details of the formalism or the computational algorithms, and should be easily understandable to a physicist with little biological background.